a gas delivery channel disposed in the chamber to deliver gas adjacent the wafer support, and

a chamber wall, the chamber wall being in thermal contact with the heating element;

wherein the Faraday shield is disposed between the heating element and the chamber wall.

2. The combination of claim 1, wherein the heating element is an electrical heating element.

3. The combination of claim 1, wherein the heating element comprises:

a conduit, and

a thermal working fluid flowing through the conduit.

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4. *(Once Amended)* The combination of claim 1, wherein the Faraday shield has a circular shape.

5. *(Once Amended)* The combination of claim 4, wherein the Faraday shield comprises:

a circular loop; and

radial segments connected together by the circular loop.

6. *(Once Amended)* A temperature management apparatus for promoting thermal uniformity for a chamber wall, the apparatus

comprising:

a Faraday shield having a predetermined shape and having edges;

a resistive heating element layered over the Faraday shield adjacent to the edges of the Faraday shield;

wherein the Faraday shield is electrically isolated from the resistive heating element and provides thermal communication from the resistive heating element to the chamber wall.

7. The temperature management apparatus of claim 6, wherein the predetermined shape promotes even distribution of heat energy over the chamber wall.

A13 cont

8. The temperature management apparatus of claim 6, further comprising:

a source of air flow disposed near the chamber wall so as to remove excess heat energy.

9. The temperature management apparatus of claim 8, where the source of air flow comprises a fan.

10. The temperature management apparatus of claim 6, further comprising:

a temperature sensor adapted to be disposed in intimate contact with the chamber wall so as to generate a temperature

signal indicative of the temperature of the chamber wall; and

a power control circuit connected to receive the temperature signal as a feedback signal so as to provide a controlled amount of power dissipated by the resistive heating element.

11. The temperature management apparatus of claim 10, wherein the power dissipated by the resistive heating element is controlled so as to be at a minimum level when plasma is energized near the chamber wall, and to be at a maximum level when no plasma is energized near the chamber wall.

12. The temperature management apparatus of claim 11, wherein the minimum level corresponds to substantially no power dissipation.

13. The temperature management apparatus of claim 6, wherein the predetermined shape is substantially radially symmetric.

14. *(Once Amended)* The temperature management apparatus of claim 13, wherein the predetermined shape comprises plural radial elements and a circular element, disposed at the outer edge of the substrate, joining the plural radial elements together.

15. The temperature management apparatus of claim 14,

wherein at least one gap is formed in the circular element.

16. The temperature management apparatus of claim 15, wherein at least two gaps are formed in the circular element, the gaps being arranged substantially symmetrically.

17. *(Once Amended)* The temperature management apparatus of claim 13, wherein the predetermined shape comprises plural radial elements and a circular element, disposed near the center of the Faraday shield, joining the plural radial elements together.

A13 cmj

18. The temperature management apparatus of claim 17, wherein at least one gap is formed in the circular element.

19. *(Canceled)*

20. The temperature management apparatus of claim 6, wherein the resistive heating element comprises: plural resistive segments arranged such that spatially adjacent ones of the plural resistive segments have electrical current flowing in opposite directions.

A14

21. The temperature management apparatus of claim 20, wherein the plural resistive segments are electrically connected in series with one another.

22. A temperature management apparatus for promoting

thermal uniformity for a chamber wall, the apparatus comprising:

a fluid conduit having a predetermined shape and having a substantially flattened cross section; and

a thermal working fluid disposed in and flowing through the fluid conduit.

23. The temperature management apparatus of claim 22, wherein the predetermined shape promotes even distribution of heat energy over the chamber wall.

24. The temperature management apparatus of claim 22, wherein the predetermined shape is substantially radially symmetric.

A1 Cont

25. The temperature management apparatus of claim 22, further comprising:

a source of air flow disposed near the chamber wall so as to remove excess heat energy.

26. The temperature management apparatus of claim 25, where the source of air flow comprises a fan.

27. The temperature management apparatus of claim 22, where the thermal working fluid is provided via connection to a temperature controlled reservoir.

28. *(Once Amended)* An apparatus for processing a semiconductor wafer comprising:

a vacuum chamber adapted to receive the semiconductor wafer therein, the vacuum chamber having a chamber wall;

a heater disposed outside of the vacuum chamber in thermal contact with the chamber wall;

A14 Cont

an RF coil disposed adjacent to the vacuum chamber so as to couple RF energy into the vacuum chamber, the heater being disposed between the RF coil and the chamber wall; and

a Faraday shield having variable shielding efficiency, the shield being disposed between the heater and the chamber wall.

29-32. *(Canceled)*

33. *(Once Amended)* The apparatus for processing a semiconductor wafer of claim 28, wherein the heater is substantially electrically transparent to the RF energy coupled into the chamber.

A15

34. The apparatus for processing a semiconductor wafer of claim 28, wherein the chamber wall is a flat lid.

35. The apparatus for processing a semiconductor wafer of claim 28, wherein the chamber wall is a dome-shaped lid.

36. The apparatus for processing a semiconductor wafer of claim 28, wherein the chamber wall is a hemispherical shaped lid.

37. *(Once Amended)* The apparatus for processing a semiconductor wafer of claim 39, wherein the source of air flow comprises a fan.

A15

38. The apparatus for processing a semiconductor wafer of claim 28, wherein the heater is in physical contact with the chamber wall.

Add new claims 39-42 as follows:

-- **39**. *(New)* The apparatus for processing a semiconductor wafer of claim 28, further comprising:

a source of air flow disposed near the dielectric wall to remove excess heat energy.

A16

40. *(New)* The combination of claim 1, wherein the chamber wall comprises the chamber ceiling.

41. *(New)* The temperature management apparatus of claim 6, wherein the chamber wall comprises the chamber ceiling.

42. *(New)* The apparatus for processing a semiconductor wafer of claim 28, wherein the chamber wall comprises the chamber ceiling. --

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